FCC ID: NUVMT53H74.
P522/P526, Carsons rule calculation.
040218/mah

Definitions.

Bn = Necessary bandwidth
M = Maximum modulation frequency
D = Peak deviation

For FRS Channels (Default)

M = 2.55 KHz
D = 2.5 KHz
K = 1

Bn = 2(2.55) + 2(2.5) = 10.1 KHz

For GMRS and BRS Channels (Reprogramming needed)

M = 3 KHz
D = 5 KHz
K = 1

Bn = 2(3) + 2(5) = 16 KHz

FCC ID: NUVMT53H74.
P522/P526 Transmitter Modulation frequency response.
040218/mah

The Peltor Headset MT53H7A4610, (FCC ID: NUVMT53H74), is built around a dedicated FRS base-band and PLL IC from CML, the CMX838. This IC contains highly stable digital filters for the transmit chain and also the limiter.

The data for the transmit filters are illustrated in Fig 11 of the CMC838 data attached to this document as page 2.

The graph marked narrow band is used as default.

The graph marked wide band is used if the Transceiver is reprogrammed for the specific GMRS or BRS channels where 5KHz deviation is permitted.
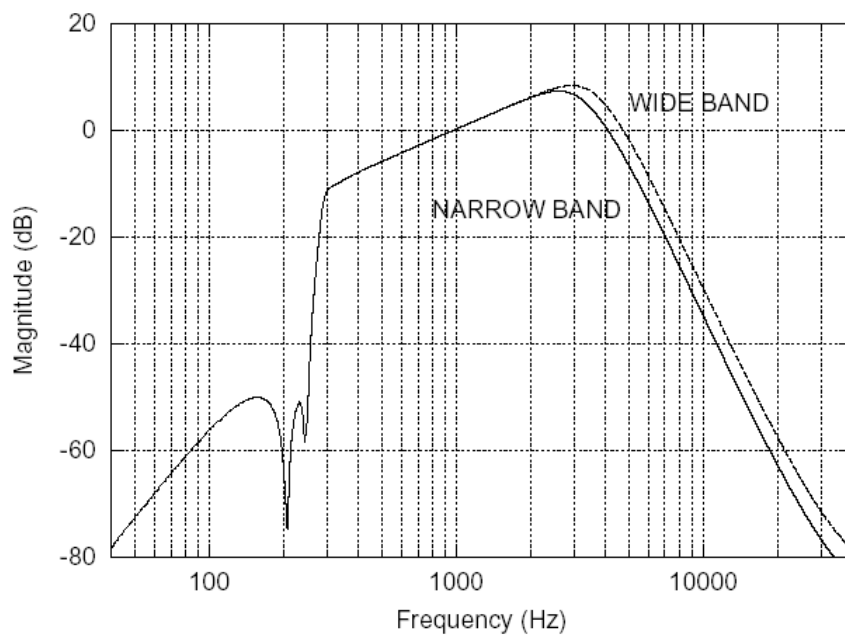
Figure 11: Transmit audio path frequency response with pre-emphasis.

FCC ID: NUVMT53H74

Measurement of the P522/P526 Transmitter Power Amplifier operating conditions.

040218/mah

Tests performed by:	Mathias Hemberg
Test Date:	040218
Test object:	Peltor Headset MT53H7A4610, Pre production sample.
FCC ID:	NUVMT53H74

General conditions

Supply voltage:	3V nominal
+3.5V internal supply	3.515V
+3.3V internal supply	3.297V

At FRS Channel 1 462.565MHz

Tx PA drive level	5.4dBm	Note 1
Tx Conducted power output	21.5dBm	Note 2
+3.5V PA supply current	105mA	

At FRS Channel 14 467.7125MHz

Tx PA drive level	5.2dBm	Note 1
Tx Conducted power output	21.0dBm	Note 2
+3.5V PA supply current	113mA	

Notes:

1. Measured by removing the PA transistor and replacing it with a 50 Ohm resistor across the base-emitter pads. The power is derived from the voltage across the resistor measured by a HP 85024A probe and a Rohde & Schwarz FSEM30 Spectrum Analyzer. The uncertainty is 1.5dB.

2. Measured by a Rohde & Schwarz FSEM30 Spectrum Analyzer. The uncertainty is 1dB.